

WHAT IS CLAIMED IS:

- 1 1. A tire tread cutting apparatus for cutting a length of tire tread to
2 be affixed to a tire casing having a cushion gum, comprising:
3 a measuring device configured to measure at least one of the
4 circumference of the tire casing and the circumference of the tire casing plus the
5 cushion gum;
6 a tread dispenser configured to automatically dispense a length
7 of tire tread based on the circumference of at least one of the tire casing and the
8 tire casing plus the cushion gum.
- 1 2. The apparatus of claim 1, wherein the tread length is dispensed
2 by pushing the tread length.
- 1 3. The apparatus of claim 1, wherein the tread dispenser
2 comprises:
3 a tread cutter, configured to cut the tread to a determined
4 length.
- 1 4. The apparatus of claim 1, wherein the tread dispenser
2 comprises:
3 a curved track for guiding the length of tire tread.
- 1 5. The apparatus of claim 1, wherein the tread dispenser
2 comprises:
3 a first clamp for clamping the length of tire tread adjacent a first
4 end; and
5 a second clamp for clamping the length of tire tread adjacent a
6 second end.

1 6. The apparatus of claim 5, further comprising:
2 a retractable stop configured to provide a known location of the
3 first end relative to the first clamp.

1 7. The apparatus of claim 5, further comprising:
2 a tread cutter, configured to cut the tread to a determined
3 length and located a known distance from the second clamp.

1 8. A tire tread cutting apparatus for cutting a length of tire tread to
2 be affixed to a tire casing having a cushion gum, comprising:
3 a measuring device configured to measure at least one of the
4 circumference of the tire casing and the circumference of the tire casing plus the
5 cushion gum;

6 a tread dispenser configured to automatically dispense a length
7 of tire tread based on the circumference of at least one of the tire casing and the
8 tire casing plus the cushion gum, the length of tire tread having a first end and a
9 second end and a periodically repeating pattern; and
10 a tread cutter configured to cut the tread to a determined
11 length.

1 9. The apparatus of claim 8, wherein the determined length is
2 specified by an operator.

1 10. The apparatus of claim 8, wherein the determined length is
2 based on matching the pattern at the first end with the pattern at the second end
3 of the tire tread.

1 11. The apparatus of claim 8, wherein the determined length may
2 be automatically specified.

1 12. The apparatus of claim 11, wherein the tread cutter is
2 configured to automatically cut the tread to the determined length.

1 13. The apparatus of claim 8, wherein the tread length is dispensed
2 by simultaneously pushing and pulling the tread.

1 14. A method of cutting a length of tire tread for a retread tire
2 having a tire casing and a cushion gum applied to the tire casing, comprising:
3 measuring a circumference of the tire casing with the cushion
4 gum applied;
5 communicating, electronically, the circumference of the tire
6 casing with the cushion gum applied to the tire tread dispenser; and
7 dispensing, automatically, a length of tire tread based on the
8 circumference of the tire casing with the cushion gum applied.

1 15. The method of claim 14, further comprising:
2 dispensing tire tread until a first end of the tire tread abuts a
3 stop.

1 16. The method of claim 15, further comprising:
2 clamping the tire tread adjacent the first end.

1 17. The method of claim 16, further comprising:
2 retracting the stop.

1 18. The method of claim 17, further comprising:
2 clamping the tire tread adjacent a second end.

1 19. The method of claim 14, further comprising:
2 cutting the tire tread to an automatically determined length.

1 20. The method of claim 14, further comprising:
2 cutting the tire tread to an operator determined length.

- 1 21. The method of claim 14, further comprising:
- 2 cutting the tire tread to a length based on the tire
- 3 tread design.

add 17